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Efficacy related to Self-Professional competence: A mixed methods approach

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For all interns, clinical experience is essential. Getting the necessary clinical experience encourages patient safety and high-quality treatment. As a result, medical facilities ought to devise ways to give interns excellent clinical learning opportunities. The purpose of this study is to look into how interns perceive their satisfaction in clinical learning environments as it relates to their self-efficacy and professional competency. Interns in Saudi Arabia working in the medical field and related fields were the subject of a mixed method study that gathered quantitative and qualitative data. An online demographics survey and open-ended qualitative questions were completed by 320 interns in total. Additionally, they completed the Clinical Learning Environment Inventory (CLEI-19) to gauge their satisfaction with the nurturing environment and the General Self-Efficacy Scale to gauge their confidence in their professional competence and self-efficacy. The general perception of clinical experience during the COVID 19 pandemic was not significantly different among the 320 interns. However, there was a significant difference in satisfaction in a supportive environment for reducing COVID 19 fear among health professionals based on demographics. Based on demographic factors, there was also a significant difference in self-efficacy and professional competency. The study recommends that healthcare facilities develop a comprehensive disaster recovery plan that includes directives for dealing with interns as well as clinical assessments to ensure they meet internship expectations in order to improve future practice and provide safe and quality care to patients..

Keywords: Interns' perceptions, self-efficacy, professional competency in the clinical setting of learning.

INTRODUCTION

Unexpectedly, COVID 19 struck, impacting numerous operations all over the world. While almost every industry faced difficulties, the health sector, which serves as the foundation for solutions, faced much more serious issues and fears. Most of the time, health professionals encounter challenges while performing their duties. Some have some experience in the field and the necessary knowledge, abilities, and skills to manage and overcome COVID-19 challenges. For interns working in the healthcare industry, however, this might not be the case because the pandemic prevented them from developing the self-efficacy skills and self-professional related competence they needed.

The educational and learning clinical environment is critical in providing great knowledge wealth as well as critical insight and practice in improving future patient care. For health professionals, clinical learning milieu is the foundation of practice; unlike some other professions, there is no alternative. Interns need the educational and clinical contexts because they help them acquire the

knowledge and skills needed for quality care delivery over decades of practice after graduation (Nordquist et al. 2019). According to research, an optimal clinical learning experience improves learning outcomes and leads to enhanced patient care. According to Garzonis et al. (2015), health professionals are trained in communication, referral, diagnosis, and psychological skills, all of which are vital aspects of the treatment process.. The view is supported by Nordquist et al. (2019), who provide additional information that interns are taught in a clinical setting. The researcher and his allies view the clinical learning environment as crucial to educating interns about the importance of developing the professional networks necessary for patient care. The acquisition of norms, values, interests, and attitudes necessary for performing roles in an acceptable manner are facilitated by professional socialization. The quality of care provided by students for decades after graduation depends on the level of educational and clinical learning experience attained during an internship, according to research by Asch et al. (2009) and Tamblyn et al. (2005), which

supports Nordquist et al. (2019), and Garzonis et al. (2015). The management of patients, the use of healthcare resources, and prescription behavior are a few examples of the aspects that are influenced.

The clinical learning environment is typically described as the material, cultural, and social context that forms the basis of medical education and facilitates interns' on-the-job learning. The organizational cultures and structures, social interactions, and physical and virtual environments that affect participants' perceptions, experiences, and learning are also referred to as "learning environments" (Nordquist et al. 2019). The definition of the educational and learning clinical environment and the roles it plays in fostering learning and professional socialization as well as the provision of safe and effective patient care are both highlighted. Despite the significant benefits that educational and learning environments have for students, self-efficacy and competence levels among interns in the medical field vary. The issue is exacerbated by a variety of difficulties encountered in various healthcare facilities. Several of the problems are as follows: As a result, interns have less self-confidence and competence because they don't have enough learning opportunities or time. The lack of time to learn from senior doctors and the working conditions in the organization were two barriers to better learning opportunities that were frequently cited by interns in Vaughan (2018). These demands cause cognitive overload, which reduces the amount of time for discussion and introspection.

The decision to focus on this subject was motivated by the dynamics affecting the health care environment and, more specifically, by the current effects of COVID 19, which have made providing health care for interns who are facing unusual and unprecedented time and challenges even more difficult (Carrascosa et al. 2020). The difficulties could cause more people to drop out of internship programs and make the provision of healthcare even more difficult. Given the importance of health care, it is crucial to comprehend interns' levels of satisfaction and the obstacles preventing them from improving their learning environments, ensuring improved patient care in the future, and boosting the number of interns enrolled in the program. Various factors exist that lead to interns satisfaction.

Such elements are highlighted in four interactive components of a learning environment which include physical and virtual, organizational, social, and personal components, as shown in Figure 1.

The personal component allows learners to interact with various activities leading to personal growth through meaningful and relevant learning selection and clarity about goals. The component fosters professional identity development and increases autonomy. The social component enables learners to collaborate with other professionals to navigate through multiple relationships to shape their perceptions. Examples of the relationships include learner to a patient such as trust and

responsibility, learner to faculty such as mentoring, communication, and feedback, and peer to peer such as culture and shared values.



Figure 1: Four interactive components of the learning environment: personal, social, organizational, physical and virtual (Gruppen, Irby, Durning, & Maggio, 2018).

Additionally, the organizational component avail support, guidance and structure for learning. Such aspects include culture and policies, organizational practices, accreditation rules, community placements, artifacts and curriculum resources. The fourth component is physical and virtual space in practice settings which foster learning. Virtual components could include electronic health records and online resources. The positive learning environment demonstrated by the four components creates a welcoming surrounding which promotes satisfaction, collaboration, academic performance and well-being of interns; hence high self-efficacy and self-professional competency (Gruppen et al. 2018).

Health care setting face various challenges that make it educational and clinical learning environment challenging for interns. Currently, aspects such as staff shortage, financial constraints and the COVID 19 pandemic have made it unprecedentedly difficult for learners to acquire nursing practice knowledge and skills in hospitals. As a result, they are limited to obtain optimal self-efficacy and self-professional competence needed for future patient causing dissatisfaction. Optimal knowledge and skills in health care systems are vital in providing safe and quality patient care. Therefore, it is essential to examine the clinical learning experience of interns in learning environments to understand elements that can promote their satisfaction. The aim of this paper is to explore elements that impact interns' clinical learning environments, negatively leading to reduced self-efficacy and self-professional competence to help develop improvement measures.

The pyurpose of the current study were o assess

interns' satisfaction with the clinical environment especially how they perceive it during the effects of COVID 19 (whether the environment is supportive or not in terms of overcoming and facilitating the overwhelming of the fear that is resulted from this pandemic among the healthcare professionals).

To assess optimistic self-beliefs to cope with a variety of challenging demands in life, including measuring how the interns' self-efficacy is related to their professional competency.

MATERIALS AND METHODS

The research employed a mixed-methods approach and utilized both qualitative and quantitative data. The research was guided by the following inquiries:

Are there any differences between interns in terms of how they feel about the clinical setting, particularly in light of how COVID 19 has affected it?

Do the satisfaction, feedback, and challenging experiences that interns had during their COVID 19 internship period differ from one another?

In terms of interns' self-efficacy and professional competency, are their differences in interns' optimistic self-beliefs to handle a variety of difficult demands in life.

In this research study, participants' qualitative information was gathered using three themes (clinical experience enhanced learning, clinical experience hindered learning, and well organized program learning).

The study involved bachelor interns from Saudi Arabia Universities. The interns were in medical sciences and related fields and were still in internship session. Both male and female interns were involved, whereby most of them majored in nursing and applied medical sciences related fields. The total population size of the interns was 317. The participants were spread across three Western regions clinical sites.

A questionnaire was used to gather demographic information, including gender, age, clinical sites, and GPA. This survey was completed through an online survey. A clinical Learning Environment Inventory (CLEI-19) tool developed by Professor Chan, (2001). With only 19 items were used to measure interns' satisfaction with the clinical environment especially intern's perception during the effects of COVID 19. A General Self-Efficacy Scale consisting of the 10-item psychometric scale was also used to measure optimistic self-beliefs to cope with a variety of difficult demands in life. The scale was made on a 4-point scale including (1-not at all true, 2-hardly true, 3-moderately true, 4-exactly true). Three themes (clinical experience enhanced learning, clinical experience hindered learning, and well-organized program learning) were used as open-ended qualitative questions, and they asked interns to describe their most satisfying, feedback, and challenging experiences during their internship period of COVID 19. The questions were incorporated into the online survey for demographic questions.

Ethical considerations

All interns' participants included in the study gave their written consent to participate in the research. Also, clinical sites where students were undergoing internship gave approval for the study with ethical approval No: 43-028.

RESULTS

Quantitative data

The quantitative survey was completed by all interns (317). The intern response rate for every demographic variable, such as gender, age, clinical sites, and GPA. For all question criteria, an average rate of approximately 95% was recorded.

None of the interns' opinions of the clinical learning environment's effects on COVID 19 were significantly different ($p > .05$). However, there was a significant difference ($p .02$) in interns' perceptions of their ability to handle a variety of demanding situations in life, as measured by their self-efficacy, professional competency in clinical settings, personal GPA, and medical histories. No significant difference ($p > .05$) was found in the CLEI-19 tool results for satisfaction with perception of COVID 19 effects. The General Self-Efficacy Scale results, however, revealed a significant difference ($p .003$) in optimistic

This study demonstrated that there were no significant differences in interns' perceptions of the clinical experience's effects related to COVID 19 ($p > .05$) between males and females, interns from various clinical sites, interns with various majors, GPAs, and medical histories. The perception of optimistic self-beliefs among interns varied significantly ($p .027$) at the item level. In terms of optimistic beliefs, there were significant differences in medical history, GPA, and clinical sites ($p .013$). There were no appreciable differences ($p > .05$) between gender and the major items, though.

Table 1: The CLEI assessment scores

Scale	Mean	±STD
Personification	23.68	9.98
Student satisfaction	21.58	7.91
Involvement	20.70	10.87
Task orientation	19.40	10.13
Innovation	14.42	8.68
Individualization	19.40	0.87

Qualitative

A total of 317 interns responded to the three narrative open-ended questions, with a 95% response rate (304). Females made up 54.7% of all respondents, while males made up 45.3%. Taif University had 42.1% interns, Umm Al-Qura University had 32.9% interns, and King Abdulaziz University had 25% interns. The average age of the students who took part was 22.920.92. The participants' ages ranged from 21 to 24. Overall GPA was found to be higher (M 3.27 Std 0.67) in female interns than male

interns across all clinical sites (M 3.09 Std. 0.79). Table 1 shows the socio-demographic characteristics of the participants.

Three themes were used in this research study to collect qualitative data from the participants which includes clinical experience enhanced learning, clinical experience hindered learning, and well organized program learning. Table 3 shows the themes and their descriptions *Clinical experience enhanced learning*

In terms of clinical experience that enhanced their learning, one item came out clearly. Interns stated to have developed skills to deal with multiple patients within a limited. They also claimed to have improved skills in developing patient care plan and documentation. Respondent 15 said, "Working with chronically ill patients made me realize better methods to incorporate when treating the patients to ensure their safety from COVID 19." Respondent 21 said, "Going for many ward rotations than expected and sometimes without the guiding senior doctor made me develop coping skills to have all duties

accomplished."

Clinical experience hindered learning Vs. Well organized program

In terms of the hindered learning experience, interns stated shortcomings such as limited learning time, inadequate personal protective equipment, and lack of needed guidance from senior doctors due to time. Respondent 9 said, "Sometimes I would only work with a senior doctor for two hours is a shift." Respondent 30 said "I was afraid of attending to patients with personal protective equipment as I did not want to be infected, and I have a pre-existing condition. Despite all challenges faced, the interns found the program to be well organized, it provided an excellent network between interns and health care setting. Respondent 5 said, "Even though senior doctors got caught up most of the times and would not guide interns, I acquired adequate knowledge on health care settings and functions carried out.in relation to the participants.

Table 2: Socio-demographic characteristics of the participants

Variable	Gender/Year of School/ Age/GPA	N%, M, Std.
Gender	Male	153(45.3%)
	Female	164(54.7%)
Age	Range between 22 to 24 years	M 22.92, Std -0.92
Interns by Clinical Sites	Taif University	129(42.1%)
	Umm Al-Qura University	104(32.9%)
	King Abdulaziz University	79(25%)
GPA	Male	153(45.3%) M 3.09 Std 0.69
	Female	164(54.7%) M 3.27 Std 0.97

Table 3: Themes and their descriptions in relation to the participants

Participant	Theme	Description
Student	Clinical experience enhanced learning	Ability to work under pressure Nursing care plan and documentation
	Clinical experience hindered learning	No comprehensive guidance from senior doctors No enough learning time No enough PPEs
	Well organized program	Excellent interaction network between interns and health care settings

DISCUSSION

According to the study, all interns, regardless of demographic factors, found clinical experience during COVID 19 to be difficult but still beneficial in some ways. Because interns reported having limited time with senior doctors, the CLE19 results showed high consistency. They also stated that due to the increased number of COVID 19 events, they had limited time to learn from other areas in the health care sectors in depth. Interns from clinical sites with more resources reported that their environment was more supportive because they were

provided with adequate PPE (Schwerdtle et al. 2020). This was not the case at clinical sites with limited resources. Meetings to encourage health professionals, they claimed, were sufficient. However, a lack of PPEs caused concern about infection.

According to students' optimistic beliefs, those with higher GPAs were more competent in their professional roles than those with lower GPAs, making it easier for them to manage the demands of daily life. Additionally, interns without pre-existing medical conditions showed higher levels of self-efficacy in managing unforeseen circumstances, building coping mechanisms, and

achieving their goals. This difference was also seen in clinical settings, where interns with pre-existing conditions who did not have PPEs in facilities with limited resources were concerned about getting sick and complicating their health (Mohammed & Ahmed, 2020).

Interns reported strong abilities in working under pressure in qualitative narratives. They also reported having better knowledge and skills for creating thorough patient care plans and documentation. This is because simultaneous treatment and prevention activities are required. To avoid infection and further health complications, treating a patient with a chronic condition required a carefully thought-out care plan. Additionally, all interns stated that their interactions with healthcare facilities were wonderful (Al Thiga et al. 2017). However, it appeared that some difficulties contributed to the lack of satisfaction. These included insufficient PPE that prevented interns from performing their duties fearlessly, as well as limited time for interns, senior doctors, and interns.

Implications

Students can gain outside-of-class knowledge and practical experience working with medical interns. Despite efforts to improve their clinical experience, a significant number of interns' clinical experience, according to the literature review, is not up to par (AlThiga et al. 2017). Low clinical experience during disasters like the COVID 19 is noted by Schwerdtle et al. (2020). Therefore, healthcare facilities should create a thorough disaster recovery plan that includes instructions on how to handle interns. The study's findings could be used to pinpoint areas that require improvement while creating a disaster recovery strategy that incorporates intern activities.

Despite the study's significant findings, it has limitations. For example, the study's participants are limited, which limits transferability. The clinical sites used were also limited to three, preventing generalizability to the Saudi general population. 5. Conclusions Future research should

The application of oral antioxidants, A. Archangelica and G.biloba in a body weight basis, restored functional hemoglobin derivatives and antioxidant activity by resisting the rapid formation of free radicals associated with ionizing radiation exposure. The application of protective antioxidants, particularly in combination doses, reduced oxidative stress overall.

The research revealed the level of satisfaction on the clinical learning environment of interns during COVID 19 and elaborates on whether the environment has been supportive or not helping to overcome the pandemic fears. The aspect will add to the existing problems facing interns in the clinical learning environment. It also identified problem areas that need change to improve interns' self-efficacy and self-professional competency in health care delivery.

CONCLUSION

This study sought to investigate interns' perceptions of satisfaction during this pandemic period. Overall, interns who receive adequate support and resources are satisfied with their clinical experience. Those with limited resources and little support, on the other hand, have lower clinical experience satisfaction. This results in undesirable levels of self-efficacy and professional competency. As a result, interns must undergo regular clinical assessments to ensure that they meet internship expectations in order to provide safe and quality care to patients in the future.

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

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AUTHOR CONTRIBUTIONS

The author contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

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